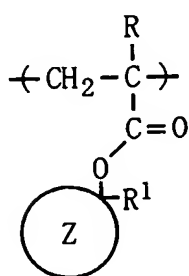


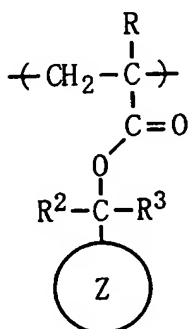
# CLAIMS

1. A photoresist resin comprising at least a constitutional repeating unit A containing a group capable of partially leaving  
 5 by the action of an acid to thereby become soluble in an alkali;  
 and a constitutional repeating unit B containing an alicyclic skeleton having a polar group, wherein the resin has a weight-average molecular weight of 3000 to 15000 and has a content of polymer fractions each having a molecular weight  
 10 exceeding 40000 of 4 percent by weight or less of the total resin.

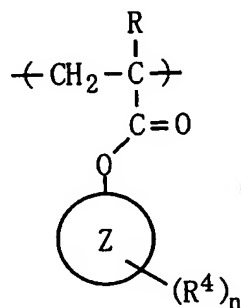
2. The photoresist resin according to claim 1, wherein the constitutional repeating unit A is at least one selected from constitutional repeating units of following Formulae (Ia), (Ib)  
 15 and (Ic):



(Ia)



(Ib)

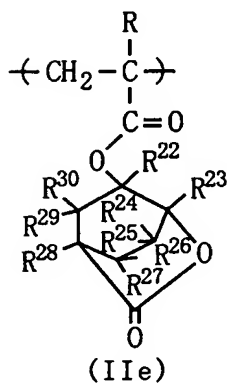
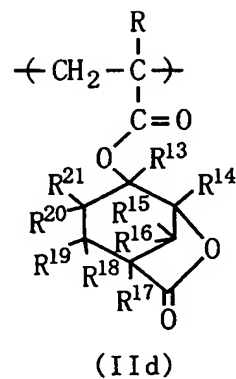
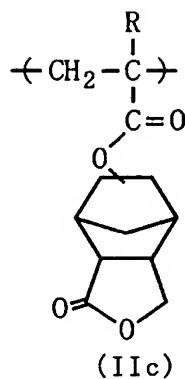
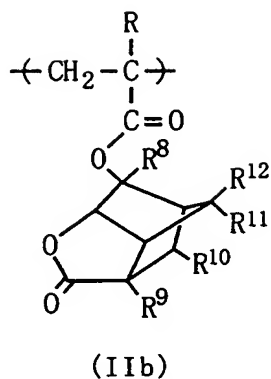
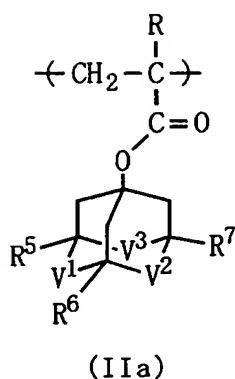


(Ic)

wherein Ring Z is an alicyclic hydrocarbon ring having six to twenty carbon atoms which may be substituted; R is hydrogen atom or an alkyl group having one to six carbon atoms; R<sup>1</sup>, R<sup>2</sup>

and  $R^3$  may be the same as or different from one another and are each an alkyl group having one to six carbon atoms;  $R^4$ s are substituents combined with Ring Z, may be the same as or different from each other and are each oxo group, an alkyl group, 5 a hydroxyl group which may be protected by a protective group, a hydroxyalkyl group which may be protected by a protective group, or a carboxyl group which may be protected by a protective group, wherein at least one of  $nR^4$ s is a  $-COOR^a$  group, wherein  $R^a$  is a tertiary hydrocarbon group which may be substituted, 10 tetrahydrofuranyl group, tetrahydropyranyl group or oxepanyl group; and n is an integer of 1 to 3.

3. The photoresist resin according to claim 1 or 2, wherein the constitutional repeating unit B is at least one selected from constitutional repeating units of following Formulae (IIa), 15 (IIb), (IIc), (IIId) and (IIe):



wherein R is hydrogen atom or an alkyl group having one to six carbon atoms; R<sup>5</sup>, R<sup>6</sup> and R<sup>7</sup> may be the same as or different from one another and are each hydrogen atom, an alkyl group, a hydroxyl group which may be protected by a protective group, a hydroxyalkyl group which may be protected by a protective group, or a carboxyl group which may be protected by a protective group; V<sup>1</sup>, V<sup>2</sup> and V<sup>3</sup> may be the same as or different from one another and are each -CH<sub>2</sub>-, -CO- or -COO-, wherein (i) at least one of V<sup>1</sup>, V<sup>2</sup> and V<sup>3</sup> is -CO- or -COO-, or (ii) at least one of R<sup>5</sup>, R<sup>6</sup> and R<sup>7</sup> is a hydroxyl group which may be protected by a protective group, a hydroxyalkyl group which may be protected by a

protective group, or a carboxyl group which may be protected by a protective group;  $R^8$ ,  $R^9$ ,  $R^{10}$ ,  $R^{11}$  and  $R^{12}$  may be the same as or different from one another and are each hydrogen atom, an alkyl group, a hydroxyl group which may be protected by a protective group, a hydroxyalkyl group which may be protected by a protective group, or a carboxyl group which may be protected by a protective group;  $R^{13}$ ,  $R^{14}$ ,  $R^{15}$ ,  $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ ,  $R^{19}$ ,  $R^{20}$  and  $R^{21}$  may be the same as or different from one another and are each hydrogen atom, an alkyl group, a hydroxyl group which may be protected by a protective group, a hydroxyalkyl group which may be protected by a protective group, or a carboxyl group which may be protected by a protective group; and  $R^{22}$ ,  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ ,  $R^{26}$ ,  $R^{27}$ ,  $R^{28}$ ,  $R^{29}$  and  $R^{30}$  may be the same as or different from one another and are each hydrogen atom, an alkyl group, a hydroxyl group which may be protected by a protective group, a hydroxyalkyl group which may be protected by a protective group, or a carboxyl group which may be protected by a protective group.

4. A photoresist resin composition, as a solution comprising the photoresist resin of any one of claims 1 to 3 and a light-activatable acid generator in a solvent.

5. A process for preparing a photoresist resin composition, comprising the step of dissolving the photoresist resin of any one of claims 1 to 3 in a solvent.